Tech Talks - Enterprise Architecture - Application of BPM

12-12-2019

Value Proposition

Business Process Management can be used to support organizations as they transform their businesses; from both an efficiency and effectiveness perspective, as well as, improving enterprise agility and customer experience

I have seen the opportunity costs for organizations who do not choose to invest in tools and simulation capabilities when making process or system changes

You wouldn't design or redesign a city with a piece of paper and pencil… so why would you design and manage an entire organization using PowerPoint and Visio?
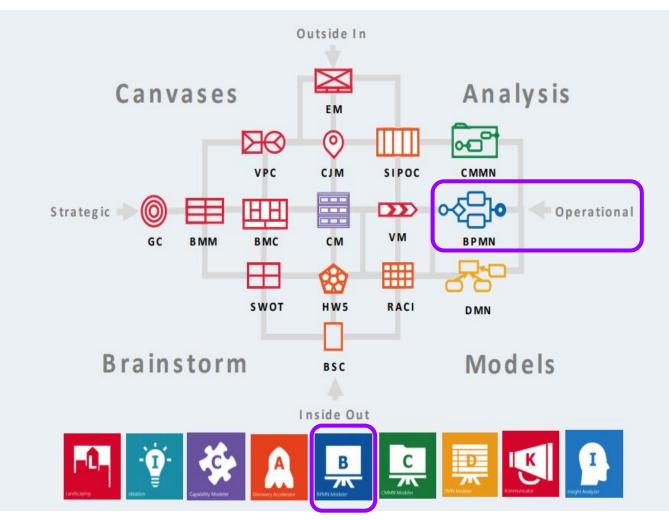
Today's Discussion

New tool to start designing and shaping GSA's business model

Focus of today is to demonstrate a new enterprise capability for modeling and simulation of business processes

Use-Case and Goals

Problem: Customer dissatisfaction is at an all-time high at 95% when it comes to our company when getting contractors deploy out to repair rental units

Use Case: Hire Contractor to Repair Renter Complaint Housing Unit	
Primary Actor (Roles)	Housing Manager
Secondary Actors (Roles)	Contractor, Contracting Specialist, Renter
Level	Summary
Trigger	Contractor estimates arrive throughout the standard business day to bid on property issues for **over 1 million units**, providing a completed and lowest bid contract estimate to a Housing Manager

Finding value in the following questions:
1. **What is the average processing time for when an estimate is reviewed?**
2. **What is the average processing time before contractor selection process begins?**
3. **Is the process sustainable?**
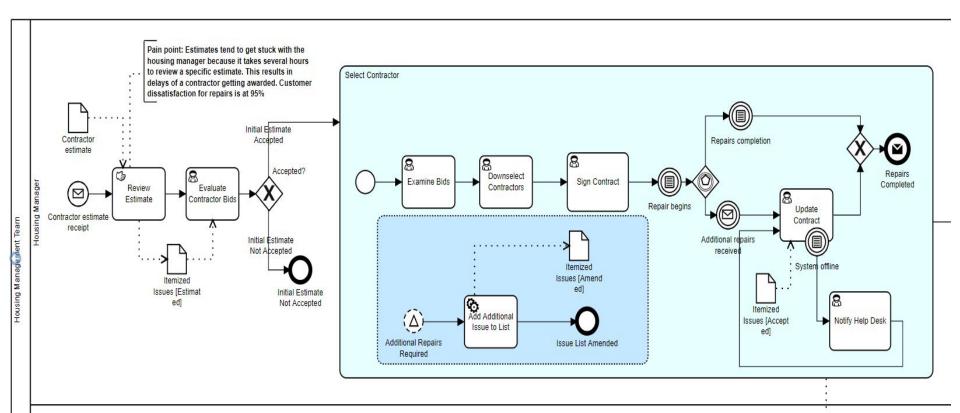   a. **Does a backlog of work build up and is all work completed by end of day?**

Goal:
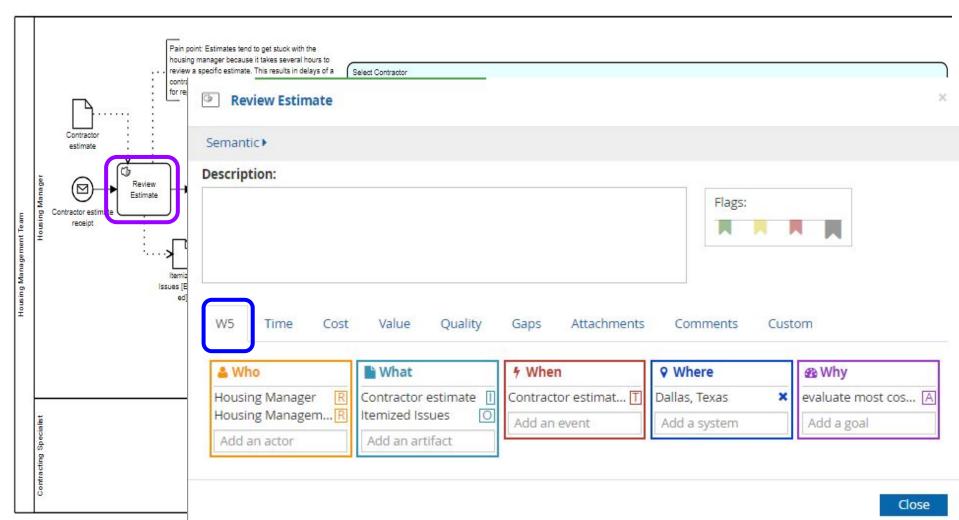1. **Identify potential bottlenecks in the AS-IS process and potential ways to alleviate them**
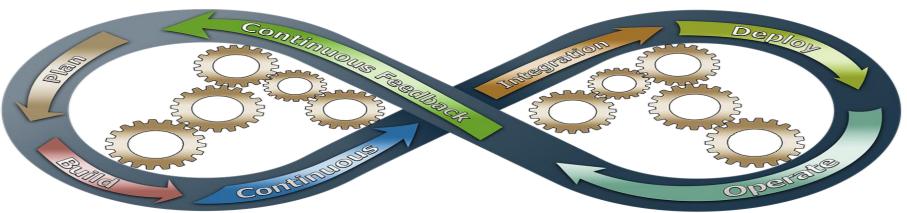
Process Model

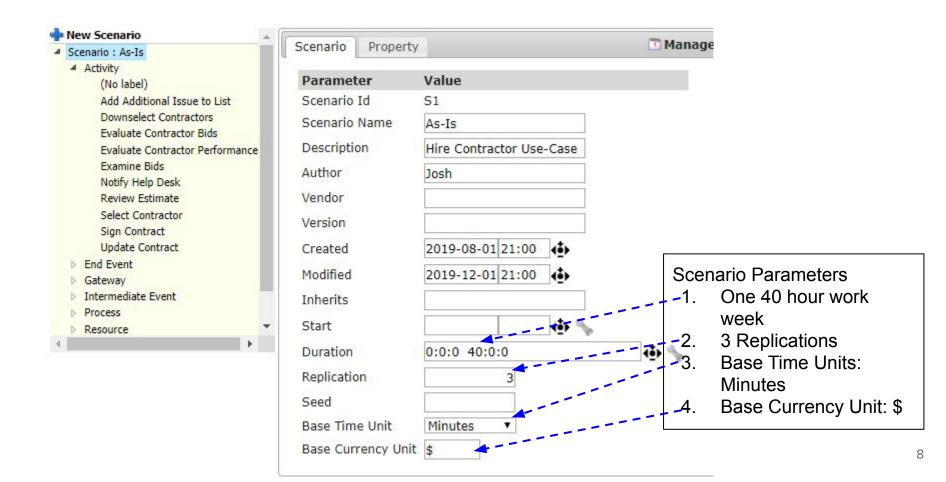# Detailed Process Model
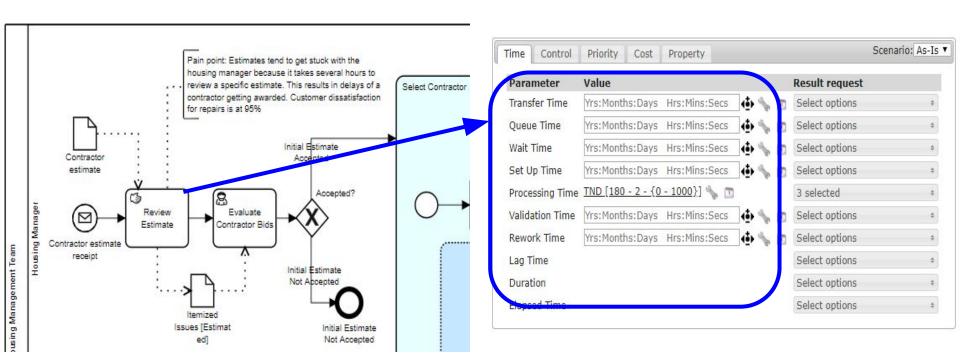
So What?

Setting Up Simulation Parameters

Process Activities and Capacity

Historical Data is Best; Interview Data Next:
1. Activity Durations (Min, Max, Average)
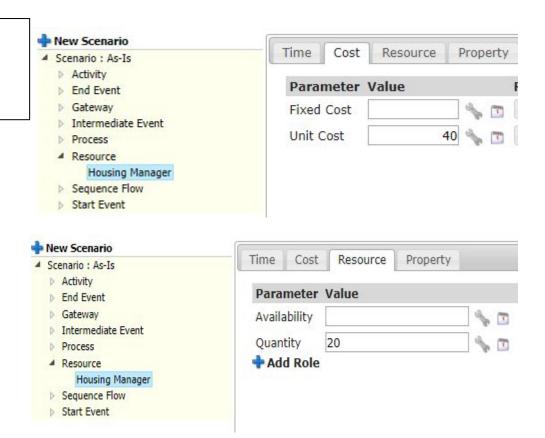2. # Contractor Estimates Received (Min, Max, Average)

Process Resources

Historical Data is Best; Interview Data Next:
1. Resources & Availability of Resources (e.g., dual hat 50%? or full-time 100%)
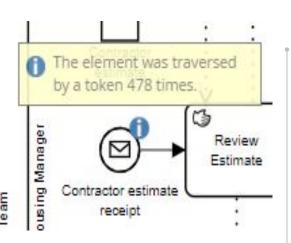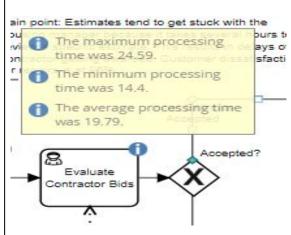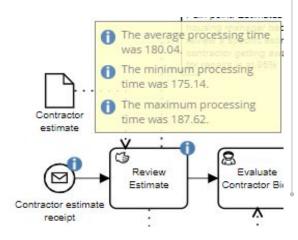
Studying the As-Is State

Capacity to handle **266 contractor estimates** with roughly 211 estimates not being reviewed in a timely fashion

The element was traversed by a token 478 times.

Review Estimate

Contractor estimate receipt

Team

ousing Manager

ain point: Estimates tend to get stuck with the

The maximum processing time was 24.59.

The minimum processing time was 14.4.

The average processing time was 19.79.

Evaluate Contractor Bids

Accepted?

Average time before the select contractor process begins is 3 ½ hours

A bottleneck occurs reviewing a contractor estimate with average process times taking 3 hours.

The average processing time was 180.04.

The minimum processing time was 175.14.

The maximum processing time was 187.62.

Contractor estimate

Review Estimate

Evaluate Contractor Bi

Contractor estimate receipt

Housing Manager	UnitCost	32000
Housing Manager	UnitCost	32000
Housing Manager	UnitCost	32000

The source of the bottleneck contributes to roughly $25,600 of the $32,000 salary for reviewing estimates per week
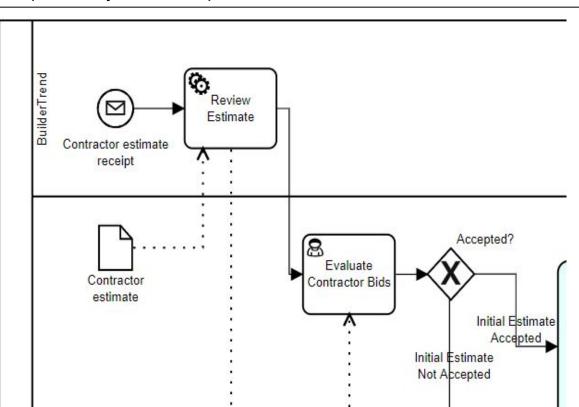
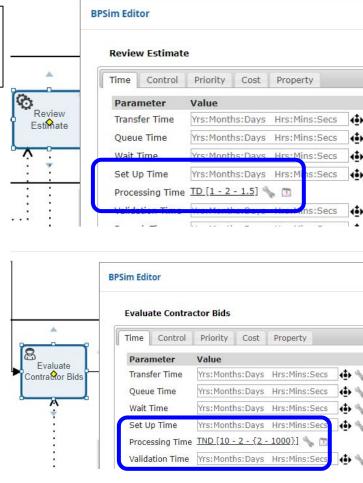# Using Simulation to Support Change

Using Simulation to Assess BEFORE Purchasing

We can look at a technology solution and based on the architecture and capabilities, calculate new execution times and resources required way before we procure a solution.
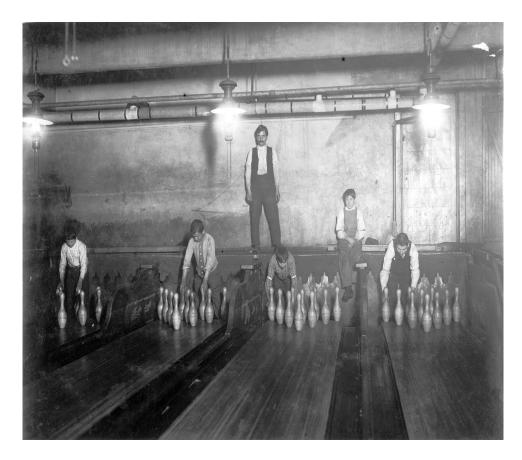
To-Be Simulation Results

- Average time to review contract estimates 1.5 minutes
  - Decrease of 2 hours and 58 minutes
- Average processing time before contractor selection process begins is 11 minutes
  - Decrease of 3 hours and 19 minutes
- Capacity for 489 estimates an hour with only 3 resources required
  - 54% capacity increase
  - $27,200 cost savings per week

Paradigm Shift

Questions